AMENDMENTS TO THE CLAIMS:

Replace the claims with the following rewritten listing:

1. (Currently Amended) A method for determining ~~the~~ sound velocity Cb in a base material ~~(34),~~ of a specimen to be tested, using an ultrasonic probe,

the probe comprising: a transmitting transducer ~~(24),~~; a receiving transducer ~~(26),~~ and a precursor body ~~(20),~~; said precursor body: ~~(20)~~ a) having a coupling surface ~~(22)~~ by which the probe is couplable to the base material ~~(34)~~, b) carrying the receiving transducer ~~(26)~~ and the transmitting transducer, ~~(24)~~ and c) having a sound velocity Cv~~,~~; said ~~the~~ transmitting transducer ~~(24)~~ and ~~the~~ said receiving transducer ~~(26)~~ being oriented to be inclined towards each other and each towards the coupling surface ~~(22)~~ so that a main transmission direction of the transmitting transducer ~~(24)~~ and a main receiving direction of the receiving transducer intersect below the coupling surface ~~(22),~~; said transmitting transducer ~~(24)~~ and receiving transducer ~~(26)~~ being spaced apart at a center to center distance K~~,~~; said ~~the~~ transmitting transducer ~~(24)~~ and ~~the~~ said receiving transducer ~~(26)~~ being spaced at a center to center distance Dv from the coupling surface ~~(22),~~;

said method comprising:

generating ~~wherein~~ an ultrasonic pulse ~~is generated~~ by the transmitting transducer ~~(24)~~ ~~and passes~~which is passed through the precursor body ~~(20)~~ into the base material ~~(34),~~;

the ultrasonic pulse produc~~inges~~ a creeping wave ~~(35)~~ in the base material, at least a portion of the creeping wave reach~~inges~~ the receiving transducer ~~(26)~~ via the precursor body ~~(20),~~; and

measuring the shortest sound travel time Ttot of the ultrasonic pulse ~~is measured~~ and the sound velocity Cb in the base material ~~(34) is determined~~ by ~~the very~~a path between the transmitting transducer ~~(24)~~ and the receiving transducer that supplies the shortest total travel time Ttot.

2. (Currently Amended) The method according to claim 1, wherein the path that supplies the shortest total travel time Ttot is determined by summing ~~up the~~ travel distance from the transmitting transducer ~~(24)~~ to the base material ~~(34)~~, the travel distance within the base material

~~(34)~~ and the travel distance from the base material ~~(34)~~ to the receiving transducer ~~(26)~~ and by optimizing said travel distances with regard to the shortest total travel time Ttot.

3. (Original) The method according to claim 1, wherein the shortest total travel time Ttot is obtained through

$$T_{tot} = \frac{K}{Cb} + 2Dv\left(\frac{1}{Cv\cos(\arcsin(\frac{Cv}{Cb}))} - \frac{\tan(\arcsin(\frac{Cv}{Cb}))}{Cb}\right).$$

4. (Currently Amended) ~~A device for carrying out t~~The method according to claim 1, wherein ~~transmitting transducer (24) and receiving transducer (26) are built according to the same principle, the~~ main beams ~~(38, 40)~~ of the transmitting transducer ~~(24)~~ and the receiving transducer ~~(26)~~ lie in the same plane, ~~and~~ these main beams ~~(38, 40) are~~ being inclined at the same angle relative to ~~the~~a coupling surface ~~(22)~~.

5. (Currently Amended) The~~A~~ method according to claim 1, further including ~~for~~ determining ~~the~~ sound velocity in a coating material applied as a layer ~~(46)~~ on ~~the~~ base material, the method comprising: ~~(34) by which method the sound velocity Cb in the base material (34) is first determined according to claim 1 and~~

placing the probe ~~is placed~~ onto the layer ~~(46)~~ having a thickness Ds~~,~~;

generating an ultrasound pulse ~~is generated~~ by the transmitting transducer ~~(24)~~ that traverses both the precursor body ~~(20)~~ and the layer ~~(46)~~ at an incline toward the coupling surface; ~~(22) and~~

producinge~~s~~ a creeping wave in the base material ~~(34)~~ a portion of which creeping wave again traverses the layer ~~(46)~~ and the precursor body ~~(20)~~ at an incline toward the coupling surface prior to reaching the receiving transducer ~~(26),~~;

registering and measuring the receive signal with the shortest total travel time Ttot ~~is registered and measured~~ ; and

determining the coating thickness Ds of the layer ~~(46) is determined~~ from that path that supplies the shortest total travel time Ttot.

6. (Currently Amended) The method ~~for determining the sound velocity Cs in a coating material~~ according to claim 5, wherein the shortest travel time Ttot is obtained from

$$Ttot = \frac{K}{Cb} + 2(Dv(\frac{1}{Cv\cos\arcsin(\frac{Cv}{Cb})} - \frac{\tan\arcsin(\frac{Cv}{Cb})}{Cb}) + Ds(\frac{1}{Cs\cos\arcsin(\frac{Cs}{Cb})} - \frac{\tan\arcsin(\frac{Cs}{Cb})}{Cb})),$$

wherein Ds = the thickness of the layer.

7. (Currently Amended) The method according to claim 1, wherein the path that supplies the shortest total travel time Ttot is determined by summing up ~~the~~ travel distance from the transmitting transducer ~~(24)~~ to the base material ~~(34)~~, the travel distance within the base material ~~(34)~~ and the travel distance from the base material ~~(34)~~ to the receiving transducer ~~(26)~~ and by differentiation after the angle.

8. (New) A device for determining sound velocity Cb in a base material of a specimen to be tested, comprising:

an ultrasonic probe comprising: a transmitting transducer; a receiving transducer; and a precursor body;

said precursor body: a) having a coupling surface by which the probe is couplable to the base material, b) carrying the receiving transducer and the transmitting transducer, and c) having a sound velocity Cv;

said transmitting transducer and said receiving transducer being oriented to be inclined towards each other and each towards the coupling surface so that a main transmission direction of the transmitting transducer and a main receiving direction of the receiving transducer intersect below the coupling surface;

said transmitting transducer and receiving transducer being spaced apart at a center to center distance K; and

said transmitting transducer and said receiving transducer being spaced at a center to center distance Dv from the coupling surface.

9. (New) The device of claim 8, wherein the transmitting transducer is configured to generate an ultrasonic pulse which passes through the precursor body into the base material, wherein the ultrasonic pulse produces a creeping wave in the base material, a portion of the creeping wave reaches the receiving transducer via the precursor body, and wherein the shortest sound travel time Ttot of the ultrasonic pulse is measurable and the sound velocity Cb in the base material is determinable by the very path between the transmitting transducer and the receiving transducer that supplies the shortest total travel time Ttot.

10. (New) The device of claim 8, wherein main beams of the transmitting transducer and receiving transducer lie in the same plane, the main beams inclined at the same angle relative to the coupling surface.